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The Weather Whisper

WHAT'S INSIDE?

Review of December 22-24 Blizzard

Kristy Carter, Meteorologist

A strong winter storm brought widespread impacts to the state right before Christmas. Light snow started the morning of 12/21 in areas west to central with snow expanding eastward, becoming moderate at times, into the morning of 12/22. In total, 2-4" fell across much of the southwest half of the state, with areas of 4-6" across portions of the northeast half. Behind the snow, winds picked up by the afternoon of 12/22 with strong northwest winds gusting to 40-55 mph, a few gusts reaching towards 60 mph during the day on 12/23! The long duration of strong 40-50+ mph gusts right after a light, fluffy snowfall led to blizzard conditions with near whiteout visibilities at times causing treacherous to impossible travel, especially in rural and unprotected areas across northern into central Iowa. Travel impacts were further exacerbated by extremely cold temperatures

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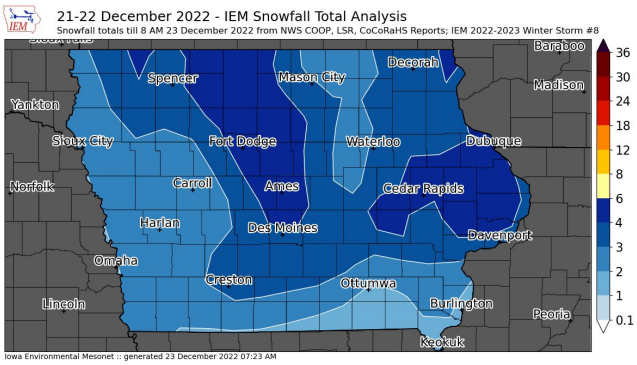
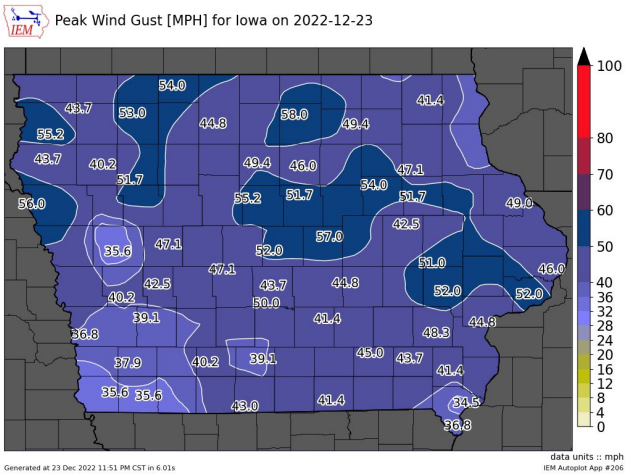


12/21-12/22 snowfall map (above) and peak wind gusts from 12/23 (below). Graphics from the Iowa Environmental Mesonet. (Click on images to view larger.)



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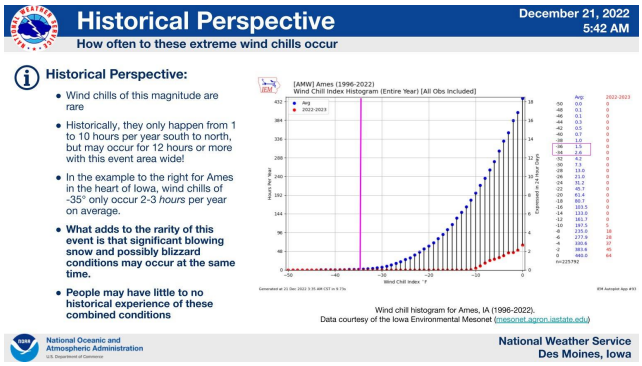
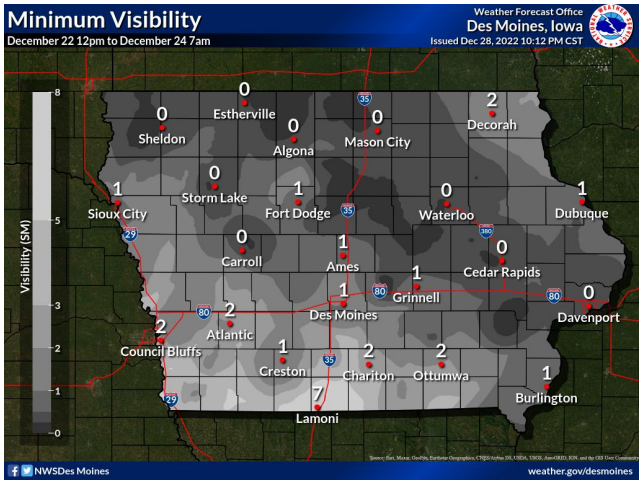
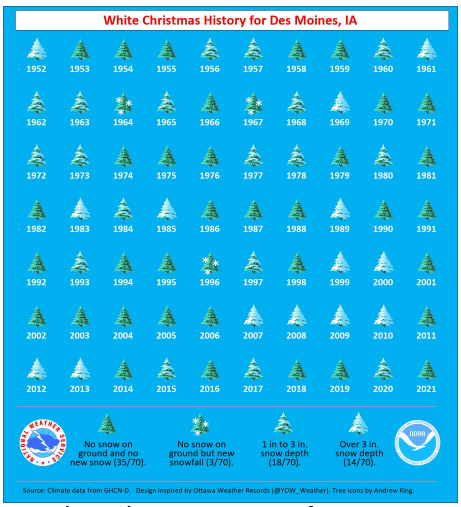
and dangerous wind chills which dipped into the -35° to -45° range late 12/22 into the morning of 12/23. Wind chills this cold are rare, even more so when combined with blizzard conditions (see graphic top right). By late 12/23 into early 12/24, the near-zero visibilities (middle picture) with blowing and drifting snow caused many roads across northern Iowa to close, including I-35 which was shut down from Ames to Clear Lake from the afternoon of 12/23 until the morning of 12/24. Visibilities across much of the state bottomed out at 2 miles or less during the multi-day event (bottom graphic) showing just how widespread the snow and blowing snow/blizzard conditions were right before the Christmas holiday. In fact, a large portion of the area saw visibility of ¼ mile or less. Travel conditions gradually improved through the day 12/24 into early 12/25 with decreasing winds and not quite as cold of temperatures and wind chills. See a time lapse of road conditions and plow activity during the entire event here: [Road condition time lapse video 12/21-12/25 by Daryl Herzmann](#).)

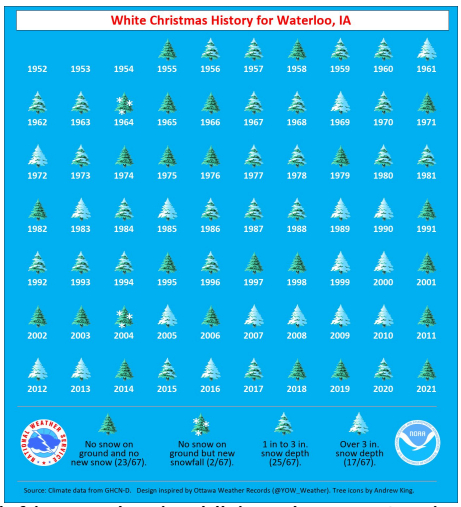


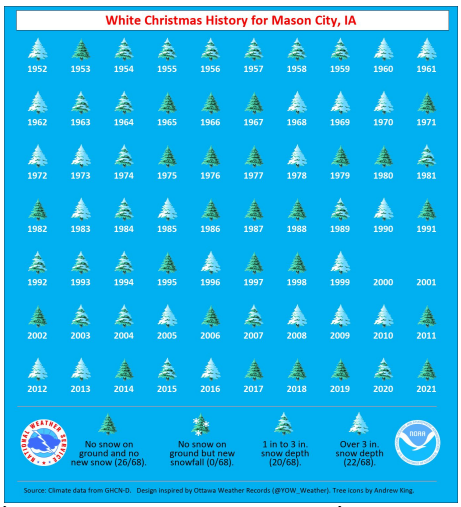
R38 south of Ames on 12/23 at 430pm. Photo by NWS Meteorologist Rod Donavon



The snow right before Christmas did allow for a white Christmas in most areas, something that happens in Iowa, on average, about 50% of the time. See below for a climatology of white christmases based on snow depth. Note, the official snow depth on 12/25/22 in Mason City was 5" and 3" in Des Moines and Waterloo.







White Christmas History for Des Moines (left), Waterloo (middle), and Mason City (right). Any missing icons means no data was available for that year. (Click on images to view larger.)

Staff Receive Cline Awards

Brooke Hagenhoff, Meteorologist

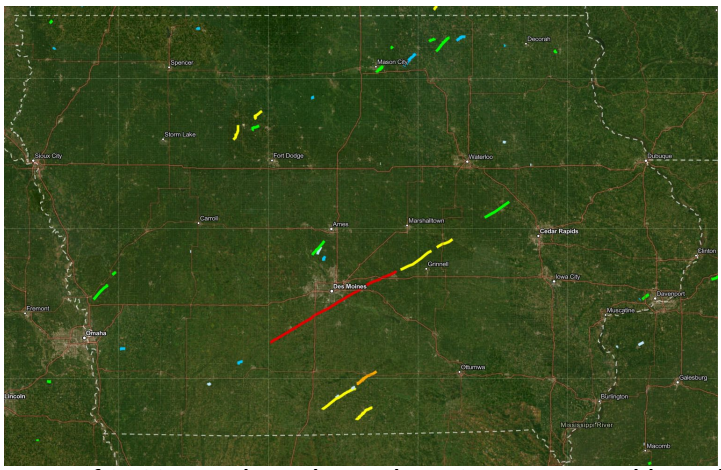
Lead Meteorologist Brad Small (pictured left) and Information Technology Officer Shane Searcy (right) recently received Cline Awards from National Weather Service HQ *for: "Operational Implementation and Exceptional Support of NWSChat to Facilitate Impact Based Decision Support Services to Core Partners"*. Brad and Shane were instrumental in the implementation of NWSChat nationally in 2008 and have served as national administrators since then. The software allows the NWS to quickly discuss impactful weather with partners including media and emergency managers. As the NWS prepares to transition to a new platform in the upcoming year, they have provided outstanding support. Congratulations, Brad and Shane!

2022 Iowa Tornado Review

Craig Cogil, Lead Meteorologist

The 2022 tornado season started much like the 2021 season ended, with several tornadoes during a cool season event. March 5th was a very impressive start to the season with a total of 15 tornadoes of which one was a long track EF4; the first EF4 in Iowa since 2013. Unfortunately, this tornado resulted in six deaths and five injuries near Winterset. With a path length was just over 70.5 miles it was one of the longest tornadoes of the past 40 years. Another deadly tornado occurred near Chariton resulted in another fatality in a campground at Red Haw State Park. The 15 tornadoes made it one of the earliest outbreaks with a total that high so early in the season.

About a month later on April 12th, another round of tornadoes struck the state with 13 spin-ups across Iowa. The peak of tornado season is normally in May and June, however 2022 was another year where these months were relatively inactive. May and June only saw a combined four tornadoes. Six additional tornadoes occurred in July and the year ended with one last tornado in the month of August, bringing the 2022 grand total to 42. While a few of these tornadoes damaged trees and farmsteads, most remained in rural areas and produced little to no damage.



Map of 2022 tornado tracks, totaling 42 in Iowa. For additional details visit https://www.weather.gov/dmx/iators2022

This December, NWS Des Moines was glad to welcome aboard two new staff members. Marvin Percha joins us from the NWS Phoenix office as the Observing Program Leader. Jesse Castillo, a student at Iowa State university, also began in the Pathways Intern position. Welcome, Jesse and Marvin!

STAFF SPOTLIGHT

Marvin A. Percha Jr.

Observing Program Leader

21 Years

Although Marvin grew up in the Phoenix area, his interest in becoming a meteorologist started when he was 4 years old in Colorado, when he got excited about the 1965 South Platte River floods in Denver. This intense interest in the weather continued when his family moved to Phoenix when he was 6. After graduating high school in 1979, Marvin went to Penn State and graduated with a B.S. in Earth Sciences/Meteo Emphasis. Marvin also served in the Air Force as an aviation forecaster. Thereafter, he worked for several years at WNI/Oceanroutes as a Marine Forecaster/Route Analyst. He completed the NWS education requirements at San Jose State University in the late 1990's.

Marvin began his NWS career as a General Forecaster at NWS Fairbanks in June 2001 and served as the Marine Focal Point. He then transferred to ZOA (Fremont, CA) CWSU in January 2005 and then to NWS Phoenix as a General Forecaster in March 2012. Marvin then become the NWS Phoenix Observing Program Leader (OPL) in October 2017. Along with his OPL duties, he helped support NWS Phoenix operations by continuing to work many forecast shifts.

Marvin's interests outside of work are spending time with his family (wife, daughter, and special-needs sons), running/working out, following Penn State football/Denver Broncos/Phoenix Suns, and astronomy.

STAFF SPOTLIGHT

Jesse Castillo

Weather Forecasting, Radar Meteorology, Instrumentation and Measurement

Pathways Intern

1 Month of Service

Jesse grew up in the small rural town of May City, Iowa. His interest in weather started at a young age after experiencing several severe weather events. He is currently a senior at Iowa State University majoring in meteorology. Prior to working at the NWS, Jesse worked for the USDA NLAE lab on the ISU campus, installing and maintaining meteorological instrumentation. His interests in meteorology lie in forecasting, radar meteorology, boundary layer meteorology, and instrumentation and measurement. He is thrilled to continue his federal service as a Pathways Intern with the NWS Des Moines office!

In his free time, Jesse enjoys watching and playing soccer with family and friends. He is a big fan of the FIFA World Cup and supports the Mexican National Team. Jesse also enjoys shortwave radio listening and making friends through amateur radio.

On the Cover:
Sun Dog or Parhelion taken in Madison County on 12/23. From the NWS Glossary, Parhelion is '*either of two colored luminous spots that appear at roughly 22° on both sides of the sun at the same elevation. They are caused by the refraction of sunlight passing through ice crystals.*' Photo courtesy of Madison County EMA.

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